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ABSTRACT

This document describes the Advanced Technology Center (ATC) at Hagerstown Community College (HCC) (Maryland), created in 1990 as a response to the region's economic decline. The ATC is a partnership between the College, industry, and government to help promote industrial modernization and regional competitiveness through training, demonstration, and technical assistance. The ATC has several types of facilities: high-technology learning classrooms and labs, a shared-production center, and several telecommunications rooms that are connected via a fiber optic distance learning network. The Center also houses an office of the University of Maryland Technology Extension Service, a Small Business Development Center, the state's regional technology council, and the four-county economic development partnership. Consequently, the College has become a primary hub of the region's economic development activities. The ATC at Hagerstown has been so successful that the state, in 1996, adopted the concept and created ATCs at other community colleges across Maryland. In their first 2 years, ATCs statewide developed and delivered industry-specific, customized training to more than 650 companies and 29,000 workers. In addition, in 1994, the College added to the effort by creating the Technical Innovation Center, a small business incubator. Due in part to the College's assistance, the local unemployment rate stands at 2.7%--much lower than in 1990, and much lower than current rates in neighboring counties. (NB)

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ED 467 199

Hagerstown Community College: Building a High Tech Base

Since 1990, Hagerstown Community College—a comprehensive community college serving some 3400 full-and part-time students in Hagerstown, Maryland—has offered an array of services to help businesses and the region improve their competitive edges. Historically dependent on agriculture and manufacturing, the region served by the college hit on hard times in the late 1980s. Hagerstown—home to Mack Trucks and Fairchild Industries (a military aircraft manufacturer), which together employed some 15 percent of the local workforce—took a significant blow when those two firms began downsizing. Indeed, Fairchild ultimately closed its Hagerstown location.

In response to the region's economic downturn, the college created, in 1990, the Advanced Technology Center, a partnership between the college, industry, and government, to help promote industrial modernization and regional competitiveness through training, demonstration, and technical assistance. In 1994, the college added to the effort by creating the Technical Innovation Center—a small business incubator. Due in part to the college's assistance, the local unemployment rate now stands at 2.7 percent—much lower than in 1990, and much lower than current rates in neighboring counties.

History of the Effort

Hagerstown is located in Washington County where Maryland squeezes between Virginia, West Virginia, and Pennsylvania. To the west, lie mountains and recreational resorts. To the southeast, lie Washington, D.C. and Baltimore, Maryland and their relatively high-powered (and increasingly high-tech) economies. Two interstate highways intersect on the outskirts of town, providing easy access to markets for the region's agricultural and manufacturing products and easy egress for the town's skilled workers who commute to jobs in the Washington-Baltimore area. Therein lie two keys to the college's economic assistance strategy as embodied in the Advanced Technology Center and the Technical Innovation Center: manufacturing and proximity to a high-tech economy.

In addition to Mack Trucks and Fairchild Industries—the region's heavyweight manufacturing firms—other manufacturers call Hagerstown and Washington County home. Most of them are small, isolated, and in danger of being left behind by technology-driven competitors. Consequently, helping manufacturers get up to speed with technology and become competitive was a natural choice for the college. (The choice was also facilitated by the need to come up with a viable reuse plan for the college's empty athletic facility.)

Likewise, proximity to the so-called "Interstate 270 Technology Corridor" that runs north out of Washington, DC through Montgomery County, Maryland made for an obvious choice: entice fledgling high-tech firms to leave the congestion and high prices of the Tech Corridor and relocate in lower-cost Hagerstown. Specifically, the goal is to get such companies to locate in the college's small business incubator, which can help the companies grow and, in turn, help provide jobs for local workers and increase the local tax base.

Advanced Technology Center

The Advanced Technology Center (ATC) at Hagerstown Community College is a partnership between industry and government that promotes industrial modernization through training, demonstration, and technical assistance. The center has 35,000 square feet of space on the main campus, and cost $5 million to construct and outfit. Administratively and fiscally, it is part of the college's continuing education division. The center's director is also in charge of the college's program in engineering technology—this in

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recognition of the overlap between the ATC's non-credit training and the college's credit training programs. Indeed, the two offerings share the same labs and classrooms, and often non-credit and credit students share the same classes. An advisory committee of 12 business leaders, educators, and regional economic developers helps guide the center's efforts.

The center is responsible for all of the college's non-credit, contract, and customized training—entry level and advanced—in industrial technologies and information systems. It targets its efforts at local small and medium-sized firms and their employees. Some 95 percent of its training is done for firms with 100 or fewer employees. The primary exceptions are extensive training for Citibank's back office processing center, which employs more than 3000 workers and training for Mack truck's local manufacturing plant, which employs 1200. The center also trains HCC students.

Among the center's offerings are: Microsoft certification training, Cisco certification training, computer networking, computer numerical control, and computer-aided design. In 1997 the ATC trained about 2700 individuals. About 25 percent of the training is conducted on site at companies.

To bolster its training efforts, the ATC has several types of facilities:

- *High technology learning classrooms and labs*—Electronics, photonics, industrial controls, and computer systems that are used by the college's credit and non-credit (including industry) students.
- *Shared production center*—Factory floor space with a CAD/CAM lab, production control and quality assurance rooms, and a computer-operated manufacturing cell that companies may lease to produce prototypes, conduct testing, etc. This gives small firms access to equipment they could not afford and saves money for larger companies. Students also learn using the equipment.
- *Telecommunications facilities*—These include two-way interactive video teleconferencing classrooms that are connected to the state of Maryland's fiber optic distance learning network.

The center also houses an office of the University of Maryland Technology Extension Service, a Small Business Development Center, the state's regional technology council, and the four-county economic development partnership. Each of these entities complements the center's offerings by providing various other services to the region's businesses. Consequently, the college has become a primary hub of the region's economic development activities.

Indeed, the ATC at Hagerstown has been so successful that the state, in 1996, adopted the concept and created ATCs at other community colleges across Maryland. In their first two years, ATCs statewide developed and delivered industry-specific, customized training to more than 650 companies and 29,0000 workers.

The Technical Innovation Center

Created in 1994 to further support economic development in the region, the Technical Innovation Center (TIC) is a business incubator whose mission is to help technology-oriented start up companies survive and thrive during their first critical years. Two factors drove creation of the TIC: 1) a recognition that changes in technology meant that new types of companies with special needs were being formed, and 2) a fear that the local intellectual capital base would erode as would-be entrepreneurs took their ideas elsewhere.

On the organizational chart, the TIC is part of the ATC and the TIC's manager answers to the director of the ATC. In operation, the relationships are not so rigid. The two work together to see that academia and industry collaborate for the benefit of the region.

Adjacent to the ATC, and sharing some manufacturing facilities with it, the TIC consists of some 30,000 square feet of space that includes a manufacturing floor, 30 office suites, and shared conference facilities. It is one of only two incubators coupled with an advanced manufacturing center on a community college campus in the United States. According to the TIC's manager, most incubators affiliated with higher-education are connected to universities. Consequently, the focus in such facilities tends to be on research rather than commercialization and economic development. In contrast, the TIC's view of itself is as "an economic development arm—an extension of the ATC to foster economic development in the community."

Services

To promote economic development of the region, the TIC offers client companies a range of services:

- *Space*. The most visible offering of any incubator is space. The TIC offers companies both

manufacturing and office space at subsidized rental rates. (First year rates are approximately 20 percent below market rate. Rates escalate over time, reaching market rate during the third year.) It also offers shared conference facilities.

- *Office support.* Client companies in the incubator are supported in day-to-day office matters by two full-time staff—the manager and an administrative assistant.
- *Equipment.* The TIC also offers companies access to an array of equipment, from advanced manufacturing machinery to high-end computers to fiber optic line. Most of the equipment is available for use without additional charge; however, some specialized equipment requires small rental fees. For example, the center provides computers to clients as part of the rental package. Use of a data projector, however, costs $25 per day—simply to cover operating costs. For a small fee, manufacturing firms in the incubator also have access to the electrostatic discharge machining station and other advanced manufacturing systems that belong to the ATC. Such access means that start-up companies can develop prototypes and even do production runs without having to buy expensive machines before they are ready to.
- *Expertise.* Adjacency to the ATC, an office of the Technology Extension Service, a Small Business Development Center, the county economic development agency, and located on a college campus has its advantages. Chief among those is easy access to people (faculty and others) with expertise in technology, manufacturing, and business. For example, clients are free to drop in on the TIC manager (a former business executive with an MBA) and get advice on anything from marketing to finance to personnel. Likewise, they are able to get help with the technology side of things from the director of the ATC (an engineer). On a more formal front, incubator clients get a price break on classes taught at the ATC.
- *Library.* The center also maintains a complete library for its clients. Holdings range from computer manuals to books on management theory. They also include an array of business periodicals such as *Business Week, Inc.*, *The Harvard Business Review*, and *The Wall Street Journal.*
- *Opportunities.* Finally, sharing space with a variety of organizations and businesses inevitably leads to networking, which often leads to opportunities. For example, Mack Trucks approached the ATC for help in manufacturing a new gear. As a result, one of the TIC clients got the contract to produce it for Mack.

Speaking about the incubator's services, Chris Marschner, manager of the TIC, puts it this way: "We focus on the little things. It's the little costs that add up that the TIC can help companies avoid by sharing."

Getting In

Specifically aimed at helping technology-oriented firms, the TIC does a significant amount of recruiting in Montgomery County, the home of a burgeoning high-tech economy. The pitch: relocate to the TIC in Washington County where the cost of living is lower and the quality of living is higher. According to Marschner, it's necessary to recruit companies from outside the county because there are too few entrepreneurs in Washington County. He attributes this in part to a lack of foreign nationals ("who tend to be more entrepreneurial") in Washington County and to county residents' tradition of working for one company for life.

Even though the TIC does not focus on "homegrown" businesses, the area benefits when outside companies move in. They bring jobs for local workers and they increase the tax base.

Not all of the incubator's clients are recruited, however. Some companies approach the TIC rather than the other way around. Of course, not all of them are actually companies. Some are simply people with an idea for a product. Nonetheless, Marschner hears them out to see if the idea could turn into a company and counsels them on how to do it.

Regardless of who approaches whom, Marschner is looking for two things: potential and commitment. Can this company succeed? Does the person have the commitment to make it succeed? The process of answering those questions (and deciding whether to admit an applicant to the incubator) includes the following steps:

- Informal interview between Marschner and the company representative to see if "it looks like a fit."
- Formal interview and informal business plan presentation
- Submission of formal business and financial plans and application (with a nonrefundable $25 fee)
- Approval of application by the manager and steering committee

Regarding business plans, Marschner says that out of all the companies he's worked with, he's seen only three good business plans at the beginning of the process. The rest took time, effort, and assistance. The point is not to have a plan that looks good to get in; the point is to have a living document that reflects the realities and changes of the business environment.

Tenants

Once in, a company may stay for up to five years. However, the TIC encourages firms to graduate earlier. Among recent and current tenants are

- Advanced Computers and Electronics, Inc. integrates electronic data collection technology (primarily bar code technology) with existing personal computer and mainframe computer systems. The company tailors each data collection solution to fit the specific needs of the customer. It offers consultation; custom software development; and hardware solutions, installation, and training.
- DVF Corporation provides innovative, technology-based solutions to the quality control, production efficiency, and other manufacturing needs of its customers.
- VoTiV Systems, LLC developed and sells proprietary domain name registration software.
- Kline Machinery, Inc. produces parts—pivot shafts, starter shafts, axles, and the like—for companies such as Harley-Davidson, Black and Decker, and Mack Trucks.
- d'Vinci Interactive develops customized interactive multimedia computer programs to help other companies enter the world of internet commerce.

In 2001 the center houses 14 firms and has some surplus space. And while the center generally operates at full capacity, Marschner would rather have some empty space in order to have flexibility and give clients room to grow. As he puts it, "We're not in the property rental business even though that's how we get the bulk of our revenue

Finances

The TIC was started with $2.1 million in grants—$1.2 million from the Economic Development Administration of the U.S. Department of Commerce, $500,000 from the Appalachian Regional Commission, and $400,000 from the Washington County commissioners.

The center's annual budget is approximately $140,000 per year, and pays for staff salary, office supplies, marketing, and equipment. The center also contributes money and equipment to the college. Revenue comes almost entirely from the rental of incubator space; occasional grants (e.g., the center recently received a $25,000 grant by Maryland's Technology Development Corporation) provide additional funding. Consequently, the center is largely self-funding. Since demand for space, and therefore the center's income, is cyclical, the TIC tries to keep one-year's worth of staff salary in the bank at all times. To other incubators, Marschner recommends setting the financial break-even point at 50 percent of the space's cost. Revenue in excess of that can then be invested back into the facility to provide the services that high-tech firms need.

Benefits

The benefits from the TIC accrue widely. Obviously, clients benefit from the low-cost space; services; and access to equipment, expertise, and networking the TIC offers. And the local economy benefits from jobs, wages, and taxes. To date, the TIC has had 34 tenants, which together have created or retained some 170 jobs. The average wage of those jobs is approximately $34,000 per year.

Indeed, Tim Troxell, Assistant Director of the Hagerstown-Washington County Economic Development Commission credits the TIC with attracting and creating high-wage jobs—something that is difficult to do. According to Troxell, TIC is helping the region to start a cluster of high-tech industries. "It's tough to get the first one, but once you do—and it succeeds—word of mouth through the network and supply chains can result in an industry cluster."

To help ensure the building of the cluster (and that companies remain and thrive in the county after graduating from the TIC), Troxell's agency works with graduates to help them find a permanent home in the county, as well as financing, and technical assistance.

Not so obvious are the benefits to the college. Ann Shipway, director of Continuing Education at the college sees the ATC and TIC as great partners for her division. "Without their collaboration, we'd be out of balance. We need all three pieces to contribute to our efforts at workforce development." Among the things that the TIC contributes to the college's education efforts are

- Access to real world businesses. That access takes a variety of shapes. Shipway sits on the TIC's steering committee. TIC clients "pop in

from time to time" to consult with one or more of the 400 adjuncts that teach classes in continuing education (themselves business people, technical experts, and the like). TIC clients have even taught continuing education classes for the college. All of these interactions enable the college to tailor its course offerings to meet real world demands.

- Real world examples to study. Students (in continuing education and in credit courses) benefit by having access to real businesses to study. In fact, one of the marketing classes routinely comes to the incubator to "fine tune the general principles they learn."
- Access to equipment. For example, the college library now has the use of a bar code scanner courtesy of the TIC.

Finally, firms not otherwise associated with the ATC or TIC benefit from the seminars and teleconferences that the TIC organizes on management and entrepreneurship, as well as the trade shows and other events it works on.

What's next?

While successful by anyone's evaluation, the TIC hopes in the future to be better able to provide for its clients and its community. To do that, it will need more private sector involvement on its steering committee and its informal network. In particular, it hopes to find someone with experience in initiating strategic alliances—something it does not possess, yet is increasingly valuable in today's business world.

Another hope is to create a bigger pool of venture capital—particularly early stage capital—for local high-tech entrepreneurs. Toward that goal, the center has been awarded a $25,000 grant by Maryland's Technology Development Corporation. With that money, the center has retained a consulting firm to assess the potential for establishing a shared-risk technology seed fund for the region to provide early stage capital to high-tech start-ups. The idea of such a fund is get local interests to invest—interests who will accept a lower return on investments in companies that will stay in, and continue to benefit, the area. As with everything else the TIC does, the point is to benefit both companies and the local economy.

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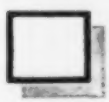

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